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CSCI 3104, Algorithms
Problem Set 3 – Due Thurs Feb 6 11:55pm

Profs. Chen & Grochow
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Advice 1: For every problem in this class, you must justify your answer: show how you arrived at it and why it is correct. If there are assumptions you need to make along the way, state those clearly.

Advice 2: Informal reasoning is typically insufficient for full credit. Instead, write a logical argument, in the style of a mathematical proof.

Instructions for submitting your solutions:

- All submissions must be easily legible.
- You should submit your work through the **class Canvas page** only.
- You may not need a full page for your solutions; pagebreaks are there to help Gradescope automatically find where each problem is. Even if you do not attempt every problem, please allot at least as many pages per problem (or subproblem) as are allotted in this template.

I apologize for not linking sources I used for help in my PDF submission. I forgot to do so and as it is passed the deadline, I thought I would be best to add them as a comment to the submission.

- **Source 1**
- **Source 2**
- **Source 3**
- **Source 4**
- **Source 5**
- **Source 6**